WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

MAY 15, JUNE 1, 1966
and
SPECIAL MEASUREMENTS

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

USDA-SCS-PORTLAND, OREG. 1965

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared

By

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State Conservationist
Soil Conservation Service
Bozeman, Montana

J. A. Asleson, Director
Montana Agricultural
Experiment Station
Bozeman, Montana

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MONTANA
WATER SUPPLY OUTLOOK
June 1, 1966

The water supply outlook has not changed to any great extent during the past month with the exception of the Big Hole-Beaverhead drainage. Mountain precipitation during May was almost non-existent in this southwest corner of the State. Late season irrigation supplies are expected to be well below average.

The mountain snow pack is decreasing at a fairly uniform rate and snow remains at only the higher elevations.

With the snow cover substantially depleted the majority of the low elevation streams are now receding. Higher elevation streams are near or have recently reached their highest levels of the year.

Irrigation reservoir storage is generally near or above average.

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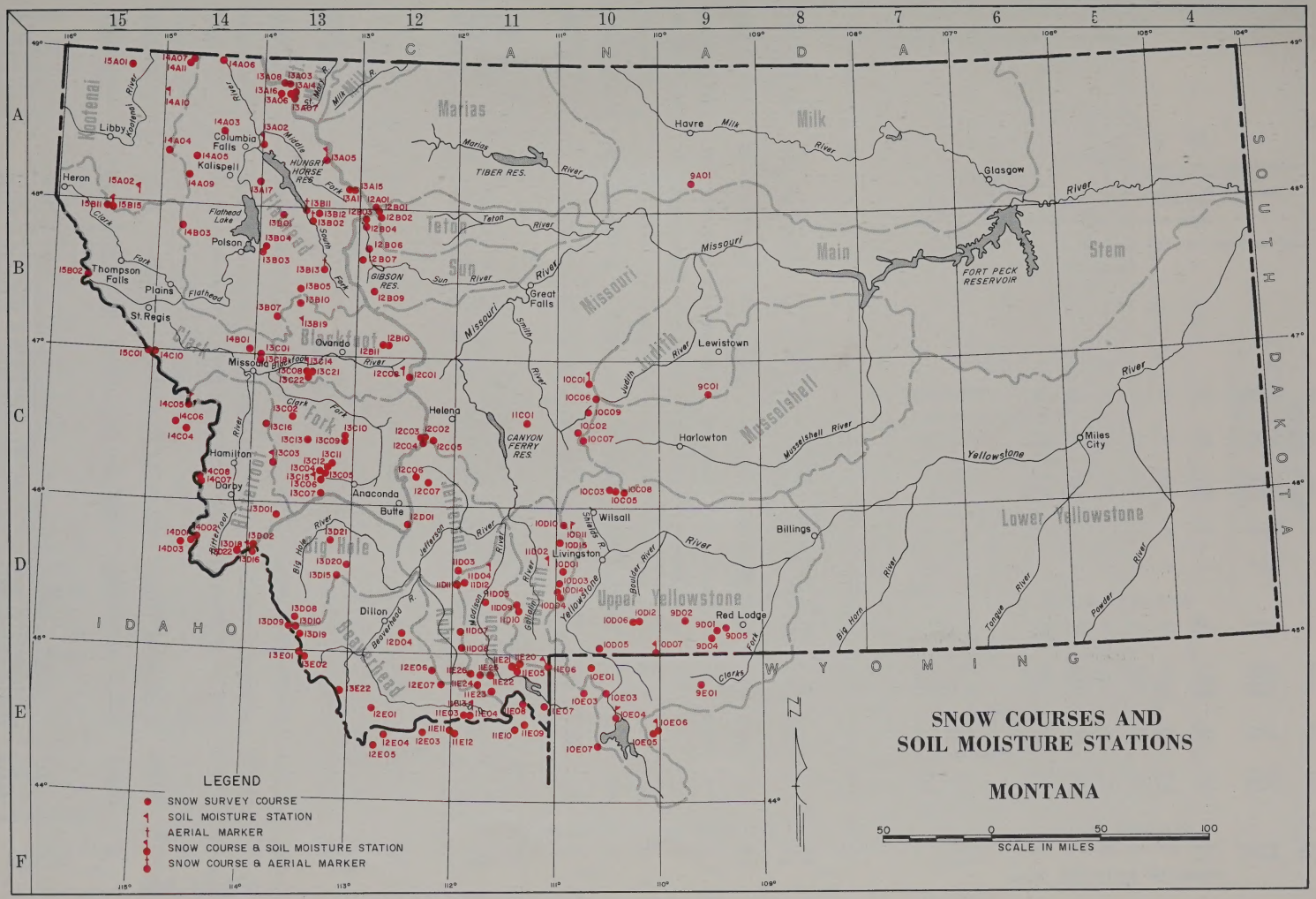

SNOW COURSES AND
SOIL MOISTURE STATIONS
MONTANA
LEGEND
SNOW SURVEY COURSE
SOIL MOISTURE STATION
AERIAL MARKER
SNOW COURSE & SOIL MOISTURE STATION
SNOW COURSE & AERIAL MARKER
SCALE IN MILES
50 0 50 100
CANADA
IDAHO
WYOMING
SOUTH DAKOTA
Libby
Heron
Kalispell
Columbia Falls
Polson
Thompson Falls
Plains
St. Regis
Missoula
Hamilton
Darby
Anaconda
Butte
Dillon
Helena
Ovando
Great Falls
Havre
Glasgow
Lewistown
Harlowton
Wilsall
Livingston
Billings
Red Lodge
Miles City
Marias
Milk
Main Stem
Sun
Teton
Missouri
Musselshell
Upper Yellowstone
Lower Yellowstone
Madison
Gallatin
Jefferson
Big Hole
Bitterroot
Flathead
Clark Fork
Blackfoot
Deerlodge
Beaverhead
Judith
Smith
Yellowstone
Boulder
Stillwater
Big Horn
Tongue
Powder
Clarks Fork
Flathead Lake
HUNGRY HORSE RES.
TIBER RES.
GIBSON RES.
CANYON FERRY RES.
FORT PECK RESERVOIR

INDEX to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

SNOW COURSES

COLUMBIA RIVER BASIN

KOOTENAI RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Baree Creek	15R11	5500	36	26N	31W	1956	3,4,5,5½	2
Baree Trail	15R15	3800	5	25N	30W	1965	3,4,5,5½	2
Brush Creek	14A04	5000	12	30N	26W	1937	3,4,5	1,2
Graves Creek	14A11	4300	1	36N	25W	1965	3,4,5,5½,6	1,2
Red Mountain	15A01	6000	4	36N	29W	1937	3,4,5,5½,6	1,2
Weasel Divide	14A07	5450	20	37N	24W	1937	3,4,5,5½,6	1,2

FLATHEAD RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Bassoo Peak	14B03	5150	11	24N	25W	1961	3,4,5	1,5
Beaver Lake	13A11	5900	31	28N	11W	1964	3,4,5	1
Big Creek	13B03	6750	7	22N	18W	1941	3,4,5, 6	1,5
Camp Misery	13A17	6400	30	28N	18W	1962	3,4,5	1,2
Desert Mountain	13A02	5600	24	31N	19W	1937	1,2,3,4,5, 6	1,2
Fatty Creek	13B04	5500	8	22N	18W	1962	3,4,5, 6	1,5
Griffin Creek Divide	14A09	5150	11	28N	25W	1960	3,4,5	1,5
Gunsight Lake	13B12	6300	35	26N	14W	1964	3,4,5	1
Hell Roaring Divide	14A03	5770	35	32N	22W	1942	1,2,3,4,5,5½,6	2
Holbrook	13B13	4530	18	21N	13W	1951	1,2,3,4,5	1
Kishenehn	14A06	3890	14	37N	22W	1954	3,4	6
Logan Creek	14A05	4300	34	30N	24W	1937	3,4,5	1,2
Marias Pass	13A05	5250	34	30N	14W	1934	1,2,3,4,5	3
Mineral Creek	13A16	4000	29	35N	17W	1957	3,4,5	6
North Fork Jocko	13B07	6330	3	17N	17W	1941	3,4,5,5½,6	1,5
Spotted Bear Mountain	13B02	7000	23	25N	15W	1948	1,2,3,4,5	1,2
Trinkus Lake	13B01	6100	9	25N	17W	1948	3,4,5	1
Twin Creeks	13B11	3580	24	26N	16W	1951	1,2,3,4,5	1,2
Upper Holland Lake	13B05	7000	28	20N	15W	1948	3,4,5	1

CLARK FORK RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Blank Pine	13C13	7100	26	8N	15W	1959	3,4,5,5½,6	1,2
Copper Creek	12B10	5700	1	15N	9W	1962	3,4,5	1,2
Cutter Mine	12B11	6250	2	15N	9W	1962	3,4,5	1,2
Coyote Hill	13B10	4200	12	18N	16W	1947	1,2,3,4,5	1,2
El Dorado Mine	13C09	7800	23	8N	12W	1949	3,4	1
Fred Burr Pass	13C11	8000	12	6N	13W	1957	3,4,5	1
Gold Creek Lake	13C10	7200	14	8N	12W	1949	3,4	1
Heart Lake Trail	14C10	4800	11	14N	27W	1965	3,4,5	1,2
Hoodoo Creek	15C01	5900	16	14N	27W	1937	3,4,5	1,2
Intergaard	13C04	6450	6	5N	13W	1936	2,3,4,5	4
Lubrecht Forest No. 3	13C21	5450	19	13N	14W	1951	1,2,3,4,5	8
Lubrecht Forest No. 4	13C22	4650	23	13N	15W	1951	1,2,3,4,5	8
Lubrecht Forest No. 6	13C08	4040	11	13N	15W	1951	1,2,3,4,5	8
Red Lion	13C12	7100	22	6N	13W	1958	3,4,5	1
Skalkaho Summit	13C03	7260	30	6N	17W	1937	3,4,5,5½,6	1
Slide Rock Mountain	13C02	7100	35	10N	16W	1937	3,4,5	1
Southern Cross	13C05	6500	8	5N	13W	1936	2,3,4	4
Spring Gulch	13C18	6000	12	14N	19W	1961	1,2,3,4,5	8
Storm Lake	13C07	7780	19	4N	13W	1939	1,2,3,4,5	1
Stuart Mill	13C06	6500	19	5N	13W	1936	2,3,4	4
Stuart Mountain	13C01	7400	6	14N	18W	1936	1,2,3,4,5,5½,6	8
TV Mountain	14B01	6800	33	15N	19W	1956	1,2,3,4,5,5½,6	8

BITTERROOT RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Ambrose	13C16	6480	28	9N	18W	1960	3,4,5	1
East Fork R. S.	13C01	5400	16	2N	17W	1937	3,4	1
Gibbons Pass	13D02	7100	4	2S	19W	1934	1,2,3,4,5,5½,6	1,3
Lost Horse	14C07	5940	5	4N	23W	1960	3,4,5,5½,6	1
Nez Perce Camp	14D02	5680	19	1S	23W	1937	3,4,5	1
Nez Perce Pass	14D01	6570	25	1S	24W	1937	3,4,5	1
Saddle Mountain	13D22	7940	5	2S	19W	1965	3,4,5,5½,6	1
Twin Lakes	14D08	6510	32	5N	23W	1960	3,4,5,5½,6	1

ST. MARY RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Iceberg Lake No. 3	13A03	5600	1	35N	17W	1922	5	3,9
Josephine Lower No. 9	13A14	4900	22	35N	16W	1955	5	3,9
Mount Allen No. 7	13A07	5700	27	35N	16W	1922	5	3,9
Piegan Pass No. 6	13A06	5500	27	35N	16W	1922	5	3,9
Ptarmigan No. 8	13A08	5800	36	36N	17W	1937	5	3,9

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Bloody Dick	13D10	7600	12	8S	16W	1948	3,4,5	1
Carter Creek	12D04	7400	22	8S	7W	1963	2,3,4	1
Dad Creek Lake	13E22	8400	24	12S	13W	1965	3,4,5	1
Elkhorn Springs	13D15	7800	21	4S	12W	1935	3,4,5	3
Gold Stone	13D09	8100	11	8S	16W	1948	3,4,5	1
Lakeview Canyon	11B04	6930	26	14S	2W	1948	3,4,5	10
Lakeview Ridge	11B03	7400	27	14S	2W	1948	3,4,5	10
Leahi Pass	13E01	7480	9	10S	15W	1948	3,4	1
Trail Creek	13E02	7090	15	10S	15W	1948	3,4	1
White Pine Ridge	12E01	8850	18	14S	9W	1948	3,4,5	1

MISSOURI RIVER BASIN (continued)

RUBY RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Clover Meadow	11D08	8600	28	9S	2W	1963	3,4,5	1
Divide	12B07	7900	14	12S	4W	1963	3,4,5	1
Notch	12B06	8500	18	11S	4W	1963	3,4,5	1

BIG HOLE RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Abundance Lake	13D20	8800	7	3S	11W	1963	3,4,5	1
Darkhorse Lake	13D19	8600	4	8S	16W	1963	3,4,5	1
Foolhen	13D21	8280	11	1S	13W	1963	3,4,5	1
Jahnke Creek	13D08	7340	25	7S	16W	1948	3,4,5	1

JEFFERSON RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Berry Meadow	12C07	7300	8	5N	5W	1962	3,4,5	1
Picnic Grounds	12C06	6500	10	5N	6W	1941	2,3,4	4
Pipestone Pass	12D01	7200	10	1N	7W	1938	1,2,3,4,5	1

MADISON RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Call Road	11D07	8050	21	8S	2W	1962	3,4,5	1
Four Mile	11D12	6900	6	4S	2W	1965	3,4,5	1
Freezeout Lake	11E25	7200	6	12S	1E	1965	3,4,5,5½,6	2
Freezeout Mountain	11E26	8250	26	11S	1W	1965	3,4,5,5½,6	2
Hebgen Dam	11E05	6550	22	11S	3E	1934	1,2,3,4,5	3
Jack Creek	11D05	7500	13	6S	1E	1961	3,4	1
Lake Creek	11E22	6100	27	11S	1E	1965	3,4,5,5½,6	2
Lower Twin	11D11	7900	12	4S	3W	1965	3,4,5	1
Meridian Creek	11E23	7000	31	12S	1E	1965	3,4,5,5½,6	2
North Meadow	11D03	7500	24	3S	3W	1961	3,4,5	1
Potomagekon Park	11E21	7150	33	10S	3E	1965	3,4,5	2
Sentinel Creek	11E20	8300	17	10S	3E	1965	3,4,5	2
Teepee Creek	11E24	8000	15	12S	1W	1965	3,4,5,5½,6	2
West Yellowstone	11E07	6700	34	13S	5E	1934	1,2,3,4,5	3

GALLATIN RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Arch Falls	10D14	7350	3	5S	6E	1963	2,3,4,5,5½,6	1
Bear Basin	11D09	8150	9	6S	3E	1963	3,4,5	1
Bridger Bowl	10D15	7250	25	1N	6E	1965	1,2,3,4,5½,6	1
Devil's Slide	10D04	8100	14	5S	6E	1935	2,3,4,5,5½,6	1
Hood Meadow	10D03	6600	22	4S	6E	1935	2,3,4,5,5½,6	1
Little Park	11D10	7400	22	6S	3E	1963	3,4,5	1
New World	10D01	6700	24	3S	6E	1939	2,3,4	1
Twenty-One Mile	11B06	7150	1	11S	5E	1934	1,2,3,4,5	3

MISSOURI RIVER MAIN STEM

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Boulder Mountain	11D01	7950	1	9N	3E	1963	3,4,5	1
Chessman Reservoir	12D05	6200	2	8N	5W	1936	1,2,3,4,5	3
Deadman Creek	10D09	6450	23	12N	8E	1966	3,4,5,5½,6	1
Elk Peak	10D07	8000	10	8N	8E	1963	3,4,5	1
Grasshopper	10D02	7000	19	9N	8E	1938	3,4,5	1
Kings Hill	10D01	7500	34	13N	8E	1934	3,4,5,5½,6	1,3
Rocky Bay	9A01	5200	15	28N	16E	1941	3,4	7
Stemple Pass	12D01	6600	16	13N	7W	1934	3,4,5	3
Ten Mile Lower	12D02	6600	12	8N	6W	1935	1,2,3,4,5	3
Ten Mile Middle	12D03	6800	13	8N	6W	1934	1,2,3,4,5	3
Ten Mile Upper	12D04	8000	19	8N	5W	1935	1,2,3,4,5	3

SUN-TETON-MARIAS RIVERS

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Badger Pass	13A15	6900	4	27N	11W	1964	3,4,5	1
Cabin Creek	12B06	5200	33	23N	10W	1949	3,4,5	1
Five-Ball	12B09	5700	25	20N	10W	1948	3,4,5	1
Freight Creek	12A01	6000	13	26N	10W	1948	3,4,5	1
Goat Mountain	12B07	7000	20	22N	10W	1934	3,4,5	3
Waldron Creek	12B02	5300	16	25N	9W	1948	3,4,5	1
West Fork	12B01	6000	6	25N	9W	1948	3,4,5	1
Wrong Creek	12B04	5700	32	25N	10W	1949	3,4,5	1
Wrong Ridge	12B03	6800	17	25N	10W	1949	3,4,5	1

JUDITH RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Crystal Lake	9C01	6100	19	12N	18E	1941	3,4	1
Spur Park	10C06	8000	20	12N	9E	1963	3,4,5,5½,6	1

UPPER YELLOWSTONE RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Bald Ridge	10C05	7500	11	4N	10E	1961	3,4,5	1
Camp Senia	9D01	7890	2	8S	18E	1937	3,4,5,5½,6	1
Crevice Mountain	10D05	8400	22	9S	9E	1935	3,4	2
Grizzly Peak	9D05	8400	26	7S	19E	1961	1,2,3,4,5	1
Independence	10D06	8000	22	7S	12E	1940	3,4,5	1
Monument Peak	10D12	9000	22	7S	12E	1961	3,4,5	1
Northeast Entrance	10D07	7400	33	9S	14E	1937	1,2,3,4,5	6
Porcupine R. S.	10C03	6500	10	4N	10E	1938	3,4,5	1
Sacajawea	10D10	6550	36	2N	6E	1960	3,4,5	1
South Fork Shields	10C08	8100	13	4N	10E	1965	3,4,5	1
Timberline Creek	9D04	8850	10	8S	18E	1961	3,4,5	1
West Rosebud	9D02	7500	9	7S	16E	1960	3,4	4

SOIL MOISTURE STATIONS

COLUMBIA RIVER BASIN

KOOTENAI RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Baree Trail	15B15M	3800	5	25N	30W	1964	Monthly	2
Murphy Lake R. S.	14A10M	3000	5	34N	25W	1964	Monthly	2
Raven R. S.	15A02M	3050	2	26N	29W	1964	Monthly	2

FLATHEAD RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Desert Mountain	13A02M	5600	24	31N	19W	1956	Monthly	1
Marias Pass	13A05M	5250	34	30N	14W	1950	Monthly	1

CLARK FORK RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Georgetown Lake	13C15M	6450	6	5N	13W	1962	Monthly	1
Lubrecht Forest	13C14M	4100	11	13N	15W	1961	Monthly	8
Seeley Lake	13B19M	4030	21	17N	15W	1963	Monthly	2
Skalkaho Summit	13C03M	7260	30	6N	17W	1964	Monthly	1

BITTERROOT RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Gibbons Pass	13D18M	7100	4	2S	19W	1962	Monthly	1
Lolo Pass	14D05M	5250	11	10N	24W	1963	Monthly	1

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Lakeview	11E13M	6700	23	14S	2W	1962	Monthly	10

MADISON RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Red Bluff	11D04M	4800	7	3S	1E	1961	Monthly	7

GALLATIN RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Bridger Bowl	10D15M	7250	25	1N	6E	1965	Monthly	1
College Site	11D02M	4856	18	2S	5E	1956	Monthly	1
Twenty-One Mile	11E06M	7150	1	11S	5E	1963	Monthly	6

MISSOURI RIVER MAIN STEM

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Kings Hill	10D01M	7420	34	13N	8E	1963	Monthly	1
Stemple Pass	12D08M	6350	16	13N	7W	1963	Monthly	1

YELLOWSTONE RIVER

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
Battle Ridge	10D11M	6020	32	2N	7E	1960	Monthly	1
Northeast Entrance	10D07M	7350	33	9S	14E	1962	Monthly	6

1/ Numerals 1,2,3,4,5,5½,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

2/ Numerals refer to Agency that secures the snow survey as follows:

1. U. S. Soil Conservation Service
2. U. S. Forest Service
3. U. S. Geological Survey
4. Montana Power Company
5. U. S. Indian Service
6. U. S. National Park Service
7. MSU Agricultural Experiment Station
8. U. of M. School of Forestry
9. Dominion Water & Power Bureau
10. U. S. Bureau of Sport Fisheries & Wildlife

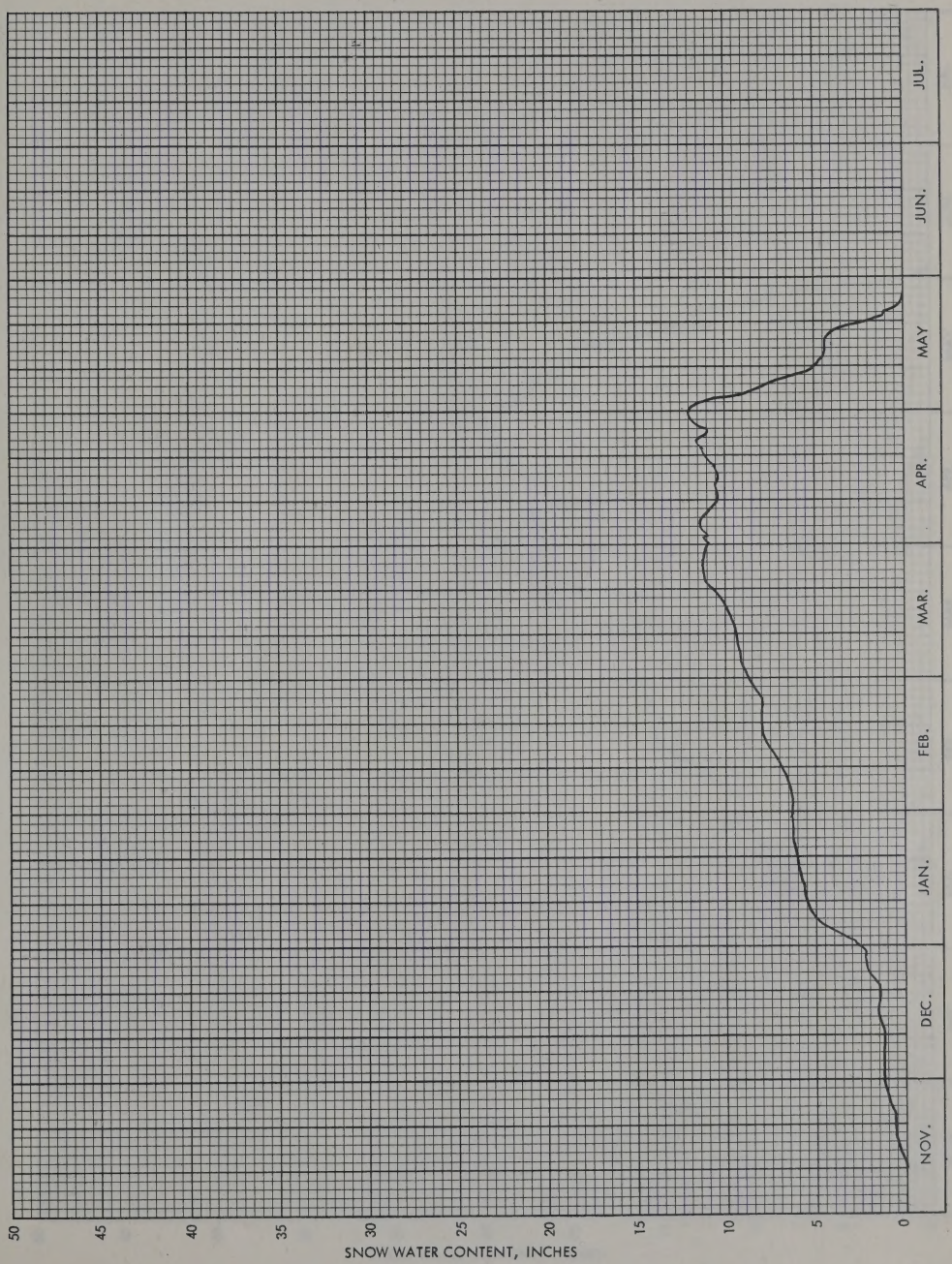
M - Soil Moisture

BLACK PINE
SNOW PILLOW DATA

AS OF MAY 1, 1966

Sec. 26 T. 8N R. 15W No. 13C13 Drainage: Columbia

Lat. 46-25 Long. 113-26 Elev. 7100 Clark Fork

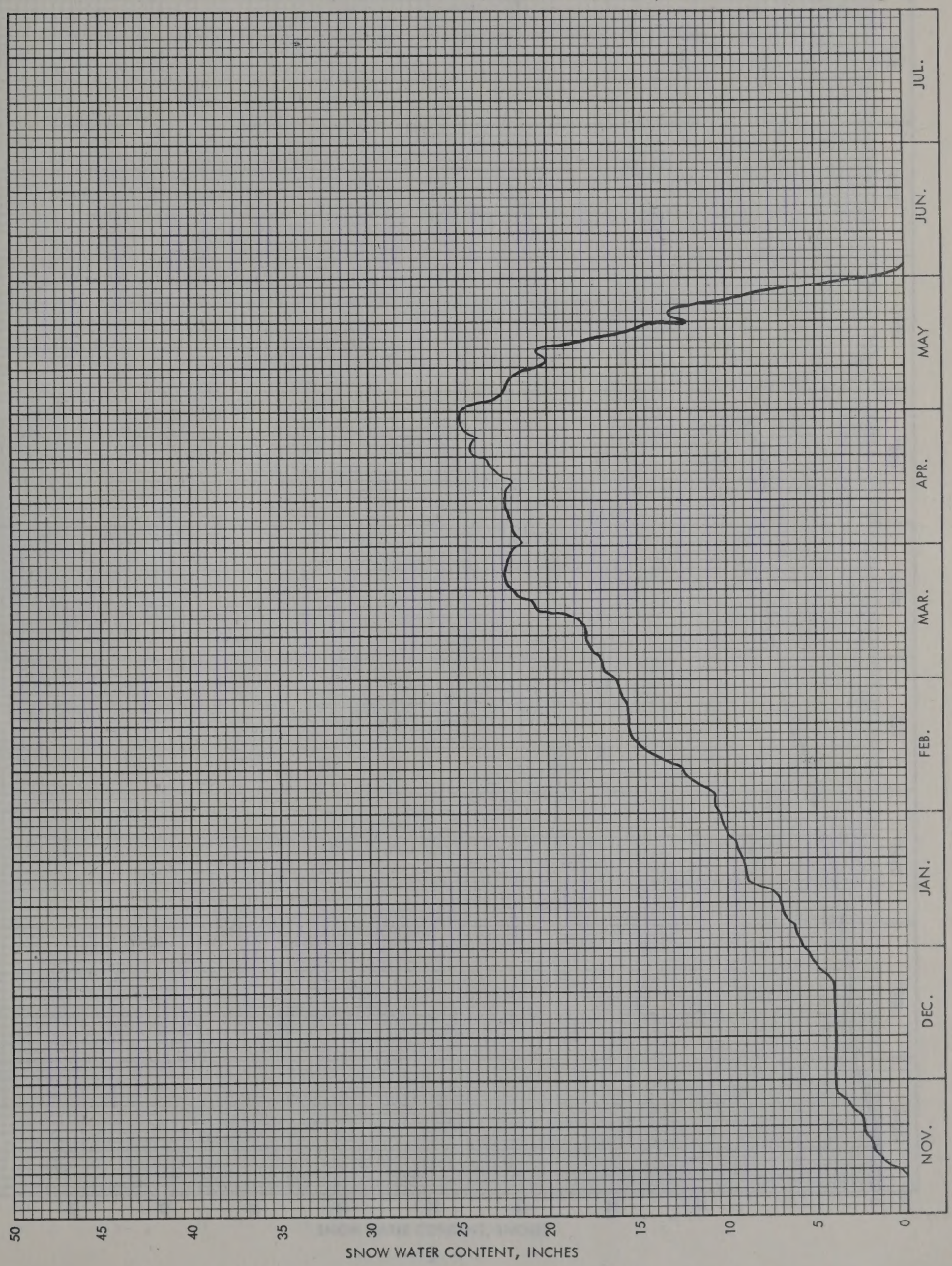


BRIDGER BOWL
SNOW PILLOW DATA

AS OF MAY 1, 1966

Sec. 25 T. 1N R. 6E No. 10D15 Drainage: Missouri

Lat. 45-48 Long. 110-55 Elev. 7250 Gallatin

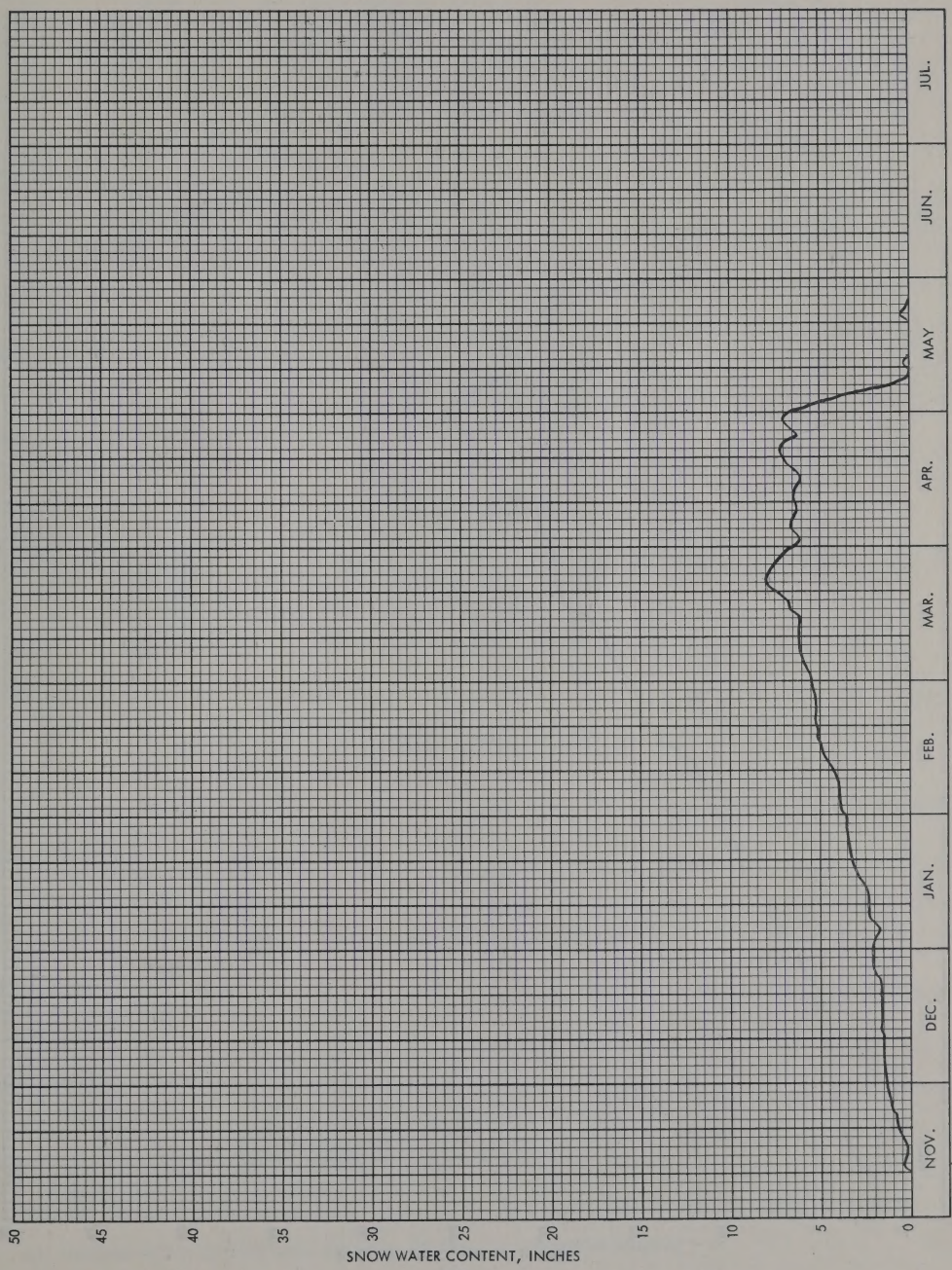


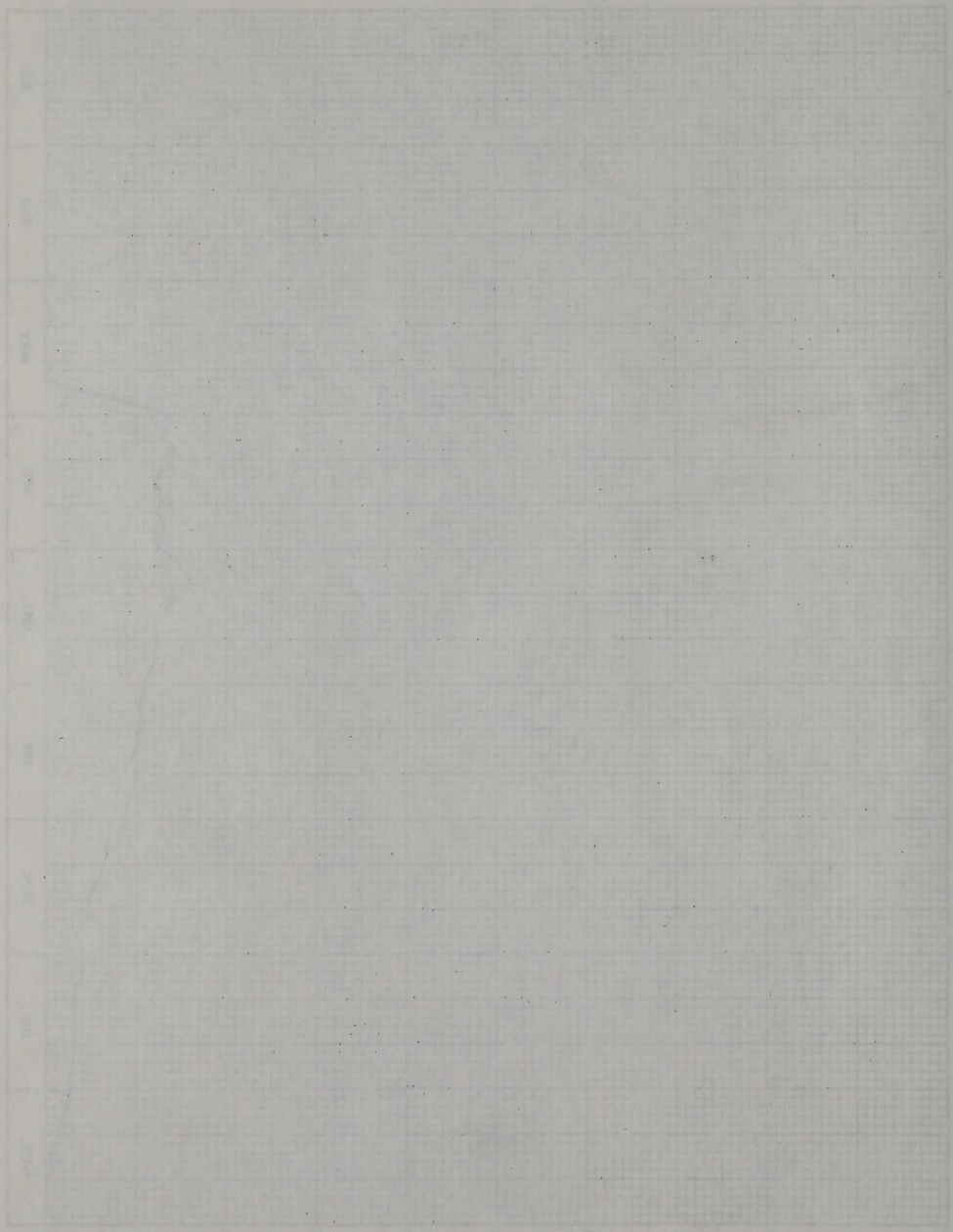
LICK CREEK
SNOW PILLOW DATA

AS OF MAY 1, 1966

Sec. 10 T. 4S R. 6E No. 10D13 Drainage: Missouri

Lat. 45-30 Long. 110-58 Elev. 6860 Gallatin



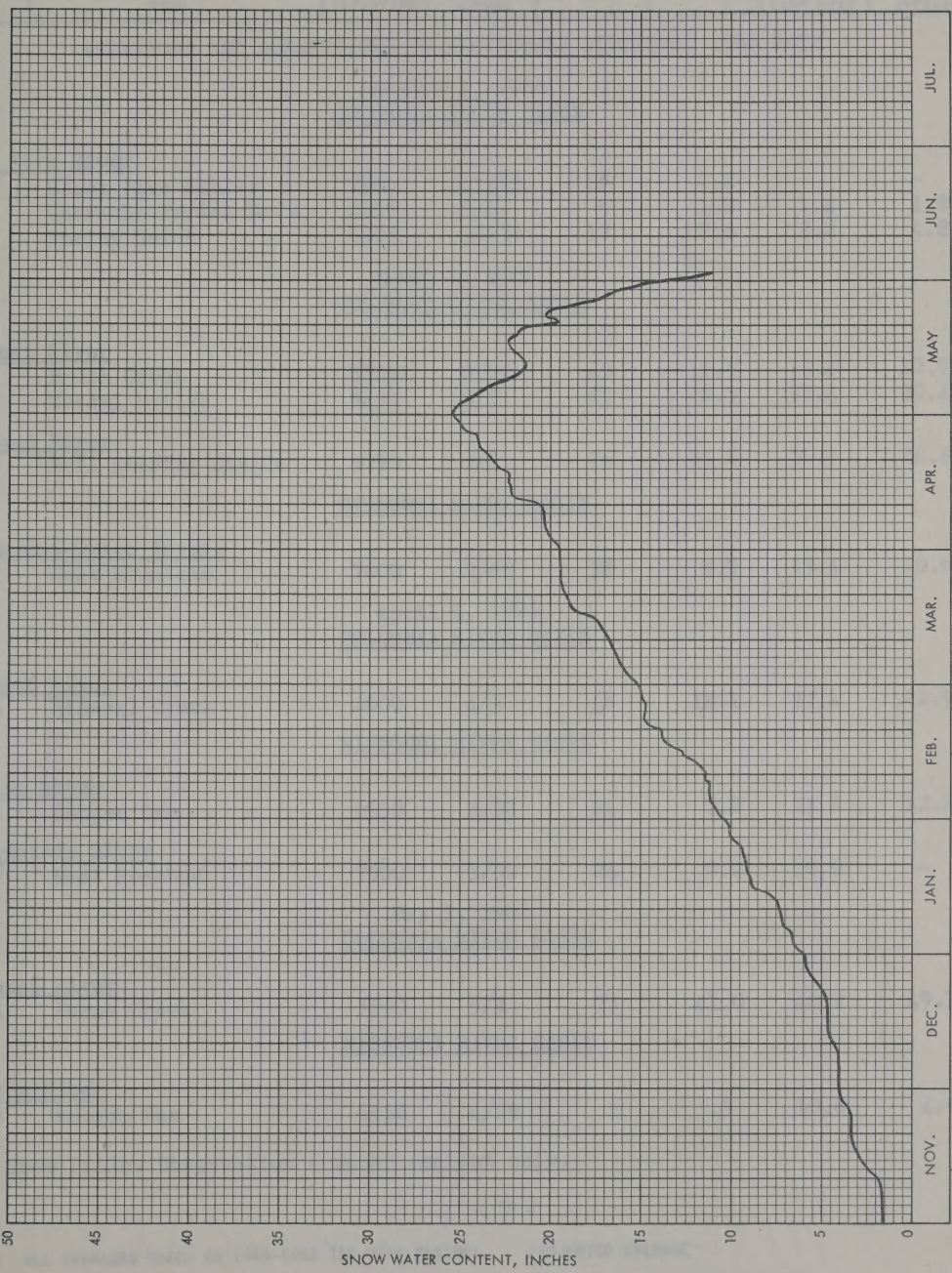


SHOWER FALLS
SNOW PILLOW DATA

AS OF MAY 1, 1966

Sec. 14 T. 5S R. 6E No. 10D16 Drainage: Missouri

Lat. 45-24 Long. 110-57 Elev. 8100 Gallatin



SNOW SURVEY DATA

AS OF

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1966 DATA							
January 1, 1966							
COLUMBIA RIVER BASIN							
Clark Fork River							
13C13	Black Pine Pillow	7100	12/28	SP	2.2	-	-
13C22	Lubrecht Forest No. 4	4650	1/2	5	1.2	1.8	1.8*
13C18	Spring Gulch	6000	12/31	17	2.6	8.2	4.8*
March 1, 1966							
COLUMBIA RIVER BASIN							
Kootenai River							
14A04	Brush Creek	5500	2/28	43	11.7	13.2	12.7*
14A07	Weasel Divide	5450	3/2	81	28.3	35.4	30.4*
Flathead River							
14A03	Hell Roaring Divide	5770	3/1	76	25.8	35.3	26.8*
MISSOURI RIVER BASIN							
Sun-Marias-Teton Rivers							
12B07	Goat Mountain	7000	2/28	38	9.9	13.4	10.6
April 1, 1966							
COLUMBIA RIVER BASIN							
Flathead River							
13A16	Mineral Creek	4000	4/3	46	18.1	27.4	22.9
MISSOURI RIVER BASIN							
Madison River							
11E05	Hebgen Dam	6550	3/30	24	7.2	15.2	12.2
Yellowstone River							
9D02	West Rosebud	7500	3/30	24	5.4	16.9	-
May 1, 1966							
COLUMBIA RIVER BASIN							
Kootenai River							
15B11	Baree Creek	5500	5/2	77	41.0	46.2	49.1
MISSOURI RIVER BASIN							
Madison River							
11E05	Hebgen Dam	6550	4/29	1	.5	10.8	4.8

SP - Snow Pillow Observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

As of

Snow Course			Current Data				Past Records		
No.	Name	Elevation	Date of Survey	Snow Depth	Water Content	Water Content	Average	Max.	Min.

ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1966 DATA

January 1, 1966

COLUMBIA RIVER BASIN

Clark Fork River

13C13	Black Pine Pillow	7200	12/28	SP	2.2	-	-	
13C22	Lookout Pass No. 4	4200	4/21	5	1.2	1.0	1.8r	
13C18	Spring Gulch	6000	12/31	17	2.6	8.2	4.8r	

March 1, 1966

COLUMBIA RIVER BASIN

Kootenai River

14A04	Brush Creek	4600	2/28	43	13.7	15.2	12.7r	
14A07	Vessel Divide	5450	3/1	81	28.3	31.4	30.4r	

Flathead River

14A03	Hell Roaring Divide	5770	3/1	76	25.8	29.3	24.4r	

MISSOURI RIVER BASIN

Sun-Marias-Teton Rivers

12B07	Dead Mountain	7000	2/28	38	9.0	13.1	10.8r	

April 1, 1966

COLUMBIA RIVER BASIN

Flathead River

13A10	Mineral Creek	4000	4/3	46	14.1	17.4	22.9	

MISSOURI RIVER BASIN

Madison River

11B05	Hebgen Dam	6550	3/30	24	7.2	13.2	12.2	

Yellowstone River

9D02	West Rosebud	7900	3/30	24	3.4	10.8	-	

May 1, 1966

COLUMBIA RIVER BASIN

Kootenai River

15A11	Burton Creek	5500	4/5	77	41.0	45.3	49.1	

MISSOURI RIVER BASIN

Madison River

11B02	Hebgen Dam	6550	4/29	1	.5	10.4	4.8	

SP - Snow Pillow Observation - water content only.

NOTE: All acreages shown on 1966-1967 ISA maps revised. Adjustment between

SNOW SURVEY DATA

AS OF MAY 15, 1966

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
COLUMBIA RIVER BASIN							
KOOTENAI RIVER							
15B11	Baree Creek	5500	5/16	54	26.7	36.6	42.3*
15B16	Baree Midway	4600	5/16	38	17.5	-	-
15B15	Baree Trail	3800	5/16	0	0.0	0.0	-
BC 10	Fernie	3500	5/13	0	0.0	0.0	-
BC 11	Glacier	4100	5/13	47	25.1	17.4	19.3*
14A11	Graves Creek	4300	5/16	14	5.6	11.6	-
BC 43	Gray Creek	5100	5/15	41	16.2	17.5	17.6*
BC 33	Kicking Horse	5400	5/15	25	9.4	-	7.8*
BC 10A	New Fernie	4100	5/13	1	0.6	0.8	-
15A01	Red Mountain	6000	5/17	29	12.8	17.0	18.4*
BC 20A	Sullivan Mine	5100	5/13	12	5.4	3.9	6.8*
14A07	Weasel Divide	5450	5/16	51	23.6	34.5	32.6*
FLATHEAD RIVER							
14A03	Hell Roaring Divide	5770	5/16	36	16.7	29.7	-
13B07	North Fork Jocko	6330	5/17	52	26.4	50.4	-
CLARK FORK RIVER							
13C13	Black Pine	7100	5/17	7	2.8	15.6	-
13C13	Black Pine Pillow	7100	5/17	SP	4.4	-	-
13C03	Skalkaho Summit	7260	5/16	28	12.4	34.2	23.0*
13C01	Stuart Mountain	7400	5/15	38	17.5	34.6	-
BITTERROOT RIVER							
13D02	Gibbons Pass	7100	5/16	6	2.6	26.9	20.1*
14C07	Lost Horse	5940	5/17	26	11.8	33.0	-
13D22	Saddle Mountain	7940	5/16	30	12.4	34.4	-
14C08	Twin Lakes	6510	5/17	46	21.4	48.8	-

SP - Snow Pillow Observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1974

Key Number	River Basin	Station	Elevation (feet)	Last Survey Date	Snow Depth (inches)	Water Equivalent (inches)	Percent of Average	Last Year Snow Depth (inches)	Last Year Water Equivalent (inches)
	KOOTENAI RIVER								
1SP11	Barren Creek	5300	5/16	24	26.7	36.6	44.2%		
1SB16	Barren Meadow	4400	5/16	35	17.5	-	-		
1SB15	Barren Trail	3500	5/16	0	0.0	0.0	-		
BC 10	Fernie	3500	5/13	0	0.0	0.0	-		
BC 11	Glacier	4100	5/13	47	29.1	17.4	19.2%		
1AA11	Grassy Creek	4300	5/16	14	5.6	13.6	-		
BC 43	Gray Creek	4100	5/15	41	15.2	17.5	17.6%		
BC 39	Kicking Horse	5200	5/13	4	8.1	-	7.8%		
BC 10A	New Fernie	3100	5/13	0	0.0	0.0	-		
1SA07	Red Mountain	5300	5/17	30	12.8	37.0	18.1%		
BC 20A	Salitrum Mine	3200	5/13	12	0.4	3.3	6.8%		
1AA07	Wardner Bridge	3450	5/16	31	23.0	34.5	32.0%		
	FLATHEAD RIVER								
1AA09	Nail Roaring Bridge	5770	5/16	34	16.7	29.7	-		
1SB07	North Fork Jocko	6130	5/17	52	28.6	30.4	-		
	CLARK FORK RIVER								
1JC13	Black Pine	7100	5/17	7	2.9	15.6	-		
1JC12	Black Pine Yellow	7100	5/17	32	4.4	-	-		
1JC03	Blackfoot Summit	7250	5/16	28	12.1	34.2	29.0%		
1JC01	Stuart Mountain	6400	5/15	58	17.5	34.0	-		
	BITTERROOT RIVER								
1JC02	Gibbons Pass	7100	5/15	6	2.6	20.3	20.1%		
1AC07	Lost Horse	5900	5/17	25	11.8	25.0	-		
1JC12	Saddle Mountain	7600	5/16	40	12.4	44.0	-		
1AC08	Twin Lakes	6150	5/17	46	32.4	48.8	-		

SP - Snow Pillow Observation - water content only.

NOTE: All average data on 1940-1969 (10 year period). "AGRICOTO AVERAGE"

SNOW SURVEY DATA

AS OF MAY 15, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN						
GALLATIN RIVER							
10D14	Arch Falls	7350	5/17	18	7.2	19.0	-
10D15	Bridger Bowl Pillow	7250	5/18	SP	15.7	32.6	-
10D04	Devil's Slide	8100	5/17	48	19.5	35.0	-
10D03	Hood Meadow	6600	5/17	0	0.0	10.0	-
10D13	Lick Creek Pillow	6860	5/13	SP	0.0	8.2	-
10D16	Shower Falls Pillow	8100	5/17	SP	22.4	-	-
MISSOURI RIVER (Main Stem)							
10C09	Deadman Creek	6450	5/16	0	0.0	9.0	-
10C01	Kings Hill	7500	5/16	27	8.2	21.6	-
JUDITH RIVER							
10C06	Spur Park	8000	5/16	46	17.8	31.0	-
UPPER YELLOWSTONE RIVER							
9D01	Camp Senia	7890	5/16	14	4.8	14.6	-
9D04	Timberline Creek	8850	5/16	38	13.3	29.0	-

SP - Snow Pillow Observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1966

SNOW SURVEY			CURRENT DATA			WATER CONTENT	
No.	Name	Elevation	Date of Survey	Snow Depth	Snow Density	Water Content	Last Year	Average
BALLATINE RIVER							
10D1A	Bush Falls	7350	5/17	18	7.2	10.0	-
10D1B	Bridger Road Pillow	7250	5/18	8P	18.7	32.0	-
10D1C	Dewitt's Ditch	8100	5/17	18	19.5	35.0	-
10D2D	Road Meadow	6400	5/17	0	0.0	10.0	-
10D1E	Fish Creek Pillow	6450	5/13	8P	6.0	8.2	-
10D1G	Shower Falls Pillow	6100	5/17	8P	22.4	-	-
MIDDLE FORK (Main Stem)							
10C0P	Deadman Creek	6450	5/16	0	0.0	9.0	-
10C0T	Alpine Hill	7500	5/16	27	8.2	21.0	-
JUPITER RIVER							
10C06	Spur Park	8000	5/16	46	17.8	31.0	-
UPPER YELLOWSTONE RIVER							
9D01	Camp Sonia	7250	5/16	16	4.8	12.0	-
9D0A	Timber-line Creek	8540	5/16	38	15.3	29.0	-

8P - Snow Pillow Observation - water content only.

NOTE: All accounts water on 1965-1966 ice year basis. "HOLOCEN ALBERTA"

SNOW SURVEY DATA

AS OF JUNE 1, 1966

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	COLUMBIA RIVER BASIN						
KOOTENAI RIVER							
BC 11	Glacier	4100	5/31	29	15.4	11.5	8.4*
14A11	Graves Creek	4300	6/1	0	0.0	0.8	-
BC 43	Gray Creek	5100	5/29	26	12.3	11.2	9.5*
BC 32	Marble Canyon	5000	5/28	0	0.0	0.0	-
15A01	Red Mountain	6000	6/1	2	0.8	7.4	6.6*
14A07	Weasel Divide	5450	6/1	17	8.6	23.6	-
FLATHEAD RIVER							
13B03	Big Creek	6750	6/1	41	23.3	49.4	42.5*
13A02	Desert Mountain	5600	5/31	0	0.0	0.7	-
13B04	Fatty Creek	5500	6/1	0	0.0	5.8	6.0*
14A03	Hell Roaring Divide	5770				16.0	-
13B07	North Fork Jocko	6330	6/2	14	7.4	33.9	30.3*
CLARK FORK RIVER							
13C13	Black Pine	7100	6/1	0	0.0	5.0	-
13C13	Black Pine Pillow	7100	6/1	0	0.0	-	-
13C03	Skalkaho Summit	7260	5/31	3	1.2	24.0	14.1*
13C01	Stuart Mountain	7400	5/27	15	7.4	30.5	20.4*
14B01	TV Mountain	6800	5/28	5	1.9	-	-
BITTERROOT RIVER							
13D02	Gibbons Pass	7100	5/31	0	0.0	14.6	6.7*
14C07	Lost Horse	5940	5/31	6	3.0	21.9	-
13D22	Saddle Mountain	7940	5/31	0	0.0	26.4	-
14C08	Twin Lakes	6510	5/31	18	9.4	37.3	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1966

SNOW COURSE				SNOW SURVEY DATA						SNOW SURVEY AVERAGE	
NO.	NAME	ELEVATION		WATER OF SNOWPACK	SNOW DEPTH INCHES	WATER CONTENT INCHES				WATER CONTENT INCHES	
										CURR. YR.	AVERAGE
COLUMBIA RIVER BASIN											
KOOTENAI RIVER											
BC 31	Glacier	4100	5/31		29		15.4		11.5		8.4*
14A11	Grave Creek	4300	6/1		0		0.0		0.8		-
BC 43	Gray Creek	5100	5/24		20		12.3		12.2		9.5*
BC 32	Marble Canyon	5000	5/28		0		0.0		0.0		-
15A01	Red Mountain	6000	6/1		2		0.8		7.4		6.6*
14A07	Wearel Divide	5430	6/1		37		8.6		23.6		-
SLAMEAHAD RIVER											
13B03	Big Creek	6750	6/1		41		23.3		49.4		42.5*
12A02	Desert Mountain	5600	5/31		0		0.0		0.7		-
13B04	Fatty Creek	5550	6/1		8		0.5		1.8		6.0*
14A03	Hell Roaring Divide	5770							16.0		-
13B07	North Fork Jocko	6320	6/2		14		7.4		23.9		20.3*
CLARK FORK RIVER											
12C13	Black Pine	7100	6/1		0		0.0		5.0		-
12C13	Black Pine Pillow	7100	6/1		0		0.0		-		-
12C03	Elkhorn Summit	7450	5/31		3		1.5		24.0		14.1*
12C01	Stuart Mountain	7400	5/27		15		7.4		30.5		20.4*
14B01	TV Mountain	6900	5/28		5		1.9		-		-
BITTERROOT RIVER											
17D02	Gibbons Pass	7100	5/31		0		0.0		14.6		6.7*
14C07	Lost Horse	5940	6/31		6		3.8		21.9		-
17D22	Saddle Mountain	7540	5/31		0		0.0		26.4		-
14C08	Twin Lakes	6510	5/31		18		9.4		27.3		-

NOTE: ALL AVERAGES BASED ON 1950-1962 (12 YEAR PERIOD). *PRELIMINARY AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN						
GALLATIN RIVER							
10D14	Arch Falls	7350	5/29	4	1.4	17.0	-
10D15	Bridger Bowl Pillow	7250	5/31	SP	2.1	28.0	-
10D04	Devil's Slide	8100	5/29	31	14.5	35.2	-
10D03	Hood Meadow	6600	5/29	0	0.0	4.4	-
10D13	Lick Creek Pillow	6860	5/1	SP	0.0	0.0	-
10D16	Shower Falls Pillow	8100	5/29	SP	15.6	-	-
MISSOURI RIVER (Main Stem)							
10C09	Deadman Creek	6450	5/31	0	0.0	0.0	-
10C01	Kings Hill	7500	5/31	1	0.4	18.8	-
JUDITH RIVER							
10C06	Spur Park	8000	5/31	18	8.0	27.8	-
UPPER YELLOWSTONE RIVER							
9D01	Camp Senia	7890	5/31	0	0.0	14.7	-
9D04	Timberline Creek	8850	5/31	9	4.3	28.8	-

SP - Snow Pillow Observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1964

Station Number	Name	Elevation	Date of Survey	Snow Course Length	Snow Depth	Water Equivalent	Percent of Normal	Percent of Last Year
	Snow Course							
	Water Equivalent							
	Snow Depth							
	Water Equivalent							
	Percent of Normal							
	Percent of Last Year							

VERMILLION BASIN

SALLAGAIT RIVER

10C1A	Arch Valley	7,200	5/27	4	14.4	57.0		—
10C15	Bridger Wood Hollow	7,000	[illegible]	5	4.1	25.0		—
10C04	Beverly Lake	9,140	[illegible]	11	14.5	83.0		—
10C03	Snow Bowl	9,200	[illegible]	0	0.0	[illegible]		—
10C13	Lake Creek Hollow	8,600	[illegible]	15	0.0	0.0		—
10C16	Beaver Valley Hollow	8,100	[illegible]	15	12.6	—		—

BIGGHORN RIVER (Big Horn Basin)

10C09	Deadman Creek	8,630	5/31	0	0.0	0.0		—
10C01	Kings Gulch	[illegible]	5/31	1	4.4	[illegible]		—

LIBBIN RIVER

10C06	Spur Park	8,400	5/31	13	8.0	57.1		—

SIXTEN MILLIONTHS BASIN

9C01	Cabin Basin	7,900	5/31	0	0.0	0.0		—
9C06	Timber Creek	8,600	5/31	0	4.3	20.4		—

SP - Snow Pillow Observation - Water Equivalent only.

NOTE: All average data on 1948-1963 (15 year period). (Average Normal)

SOIL MOISTURE DATA

AS OF

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
	ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1966 DATA							
		January 1, 1966						
		COLUMBIA RIVER BASIN						
Kootenai								
15A02M	Raven R. S.	3050	48	23.0	5/5	19.7	21.5	-
		February 1, 1966						
		COLUMBIA RIVER BASIN						
Flathead								
13A05M	Marias Pass	5250	54	6.5	1/31	5.4	5.5	5.0
		MISSOURI RIVER BASIN						
Madison								
10D04M	Red Bluff	4800	40	4.7	2/2	1.9	2.3	2.1
		March 1, 1966						
		COLUMBIA RIVER BASIN						
Flathead								
13A05M	Marias Pass	5250	54	6.5	3/5	5.3	5.8	5.3
		April 1, 1966						
		MISSOURI RIVER BASIN						
Beaverhead								
11E13M	Lakeview	6700	48	15.3	4/6	9.3	13.4	10.3
		May 1, 1966						
		COLUMBIA RIVER BASIN						
Kootenai								
15B15M	Baree Trail	3800	48	7.5	5/2	7.2	6.7	-
15A02M	Raven R. S.	3050	48	23.0	5/2	21.8	22.0	-
		MISSOURI RIVER BASIN						
Beaverhead								
11E13M	Lakeview	6700	48	15.3	5/2	15.1	16.5	15.3
Yellowstone								
10D11M	Battle Ridge	6020	48	17.6	4/29	15.6	16.6	15.4

**AVERAGE FOR PERIOD OF RECORD

SOIL MOISTURE DATA

AS OF

(Inches)

Code	Name	Elevation	Depth	Field Capacity	Wilting Point	Soil Moisture	Snow Water Equivalent	Snowpack Data	Past Record Year	Average

ADDITIONS AND CORRECTIONS TO PRECEDENCE PRECEDENCE 1966 DATA

January 1, 1966
COLUMBIA RIVER BASIN

Kootenai									
12AUGM	Sandy R. S.	3050	48	23.0	5/5	19.7	21.5	-	

February 1, 1966
COLUMBIA RIVER BASIN

Flathead									
13MOSM	Marias Pass	5250	54	6.5	1/31	5.4	3.5	5.0	

MISSOURI RIVER BASIN

Madison									
10CRAM	Red Mtnt	4900	40	4.7	2/28	1.9	2.5	2.1	

March 1, 1966
COLUMBIA RIVER BASIN

Flathead									
13MOSM	Marias Pass	5250	54	6.5	3/5	5.3	3.8	5.3	

April 1, 1966
MISSOURI RIVER BASIN

Beaverhead									
11BIGM	Lakeview	6700	48	15.3	4/6	9.3	23.4	10.3	

May 1, 1966
COLUMBIA RIVER BASIN

Kootenai									
12MOSM	Marys Trail	3800	48	7.0	5/2	7.2	6.7	-	
12AUGM	Bavon R. S.	3050	48	23.0	5/5	21.8	22.0	-	

MISSOURI RIVER BASIN

Beaverhead									
11BIGM	Lakeview	6700	48	15.3	5/2	12.1	16.5	10.3	
Yellowstone									
10GIYM	Mullin Ridge	8020	48	17.6	5/29	15.6	16.6	15.4	

"REVISED FOR MISSING OR ERRORS

SOIL MOISTURE DATA

AS OF JUNE 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
	COLUMBIA RIVER BASIN							
Kootenai								
15B15M	Baree Trail	3800	48	7.5			-	-
14A10M	Murphy Lake R.S.	3000	48	22.6	6/1	20.8	22.1	-
15A02M	Raven R.S.	3050	48	23.0			-	-
Flathead								
13A02M	Desert Mountain	5600	54	8.4	5/31	8.9	9.6	8.8
13A05M	Marias Pass	5250	54	6.5			6.1	5.8
Clark Fork								
13C13M	Black Pine	7100	48	10.0	6/1	8.0	-	-
13C15M	Georgetown Lake	6450	48	9.0	5/31	8.3	8.0	7.8
13B19M	Seeley Lake R.S.	4030	48	11.9			10.8	-
13C03M	Skalkaho Summit	7260	48	10.8	5/31	9.8	10.2	-
Bitterroot								
13D18M	Gibbons Pass	7100	48	7.1	5/31	6.8	7.0	7.1
14C05M	Lolo Pass	5250	48	10.6	5/26	9.8	10.1	-
	MISSOURI RIVER BASIN							
Beaverhead								
11E13M	Lakeview	6700	48	15.3	6/1	13.8	15.7	14.9
Madison								
10D04M	Red Bluff	4800	40	4.7	6/1	2.1	2.4	2.5
Gallatin								
10D15M	Bridger Bowl	7250	48	15.8	5/31	16.6	-	-
11D02M	College Site	4856	54	14.5	6/3	10.8	13.7	11.2
10D13M	Lick Creek	6860	48	18.8	6/1	18.7	-	-
11E06M	Twenty-One Mile	7150	48	10.0	5/28	9.6	9.9	-
Missouri Main Stem								
10C01M	Kings Hill	7420	48	11.8	5/31	11.0	10.0	-
12C08M	Stemple Pass	6350	48	5.9	5/31	5.0	5.2	5.2
Yellowstone								
10D11M	Battle Ridge	6020	48	17.6	5/31	15.2	15.8	15.4
10D07M	Northeast Entrance	7350	48	9.4			9.7	9.1

**AVERAGE FOR PERIOD OF RECORD

SOIL MOISTURE DATA

AS OF JUNE 1, 1966

No.	Place	Elevation	Depth	Soil Moisture Station Data: Date	Percent	Inches	Soil Moisture Station Data: Date	Percent	Inches	Average Soil Moisture Data: Percent	Inches
	COLORADO RIVER BASIN										
Washington											
1C21M	Lower Trout	5850	4A	7.5						-	
4A10M	Mission Lake Ridge	3060	4A	24.6	6/1	4.5	6/8	22.1		-	
4A02M	Tucker S.S.	3230	4A	21.0				-		-	
Utah											
1A02M	Pelican Mountain	8600	3A	8.4	5/31	8.5		9.6		10.7	
1A05M	Montica Pass	9230	3A	6.5				8.1		5.5	
Clark Fork											
1C13M	Lemon Pass	7100	4B	10.0	6/1		8.0			-	
1A12M	Cherry Stem Lake	6430	1B	9.0	5/31		6.3	5.0		7.8	
1A14M	Swamp Lake S.S.	4230	1A	11.9				10.8		-	
1A20M	Stanley Gulch	7260	4A	10.8	5/31		9.8	10.2		-	
Big Lookout											
1C41M	Ninemile Pass	7100	4B	7.1	5/31		6.8	7.0		7.1	
1A09M	Lake Tom	5450	4A	10.6	5/26		9.8	10.1		-	
	MISSOURI RIVER BASIN										
Waterford											
1J13M	Lakeview	6700	4B	12.3	6/1		11.8	13.7		12.9	
Madison											
1J23M	Red Bluff	4800	4D	4.7	6/2		2.1	2.6		3.5	
Gallatin											
1C02M	Bridger Peak	7230	4B	16.4	5/31		16.5			-	
1J02M	Gallatin Site	6810	4A	14.5	6/3		10.9	13.7		11.2	
1C01M	Lick Creek	6380	4B	12.8	6/1		12.1			-	
1J02M	Tenmile-Cow Mtn	7230	4B	10.6	5/23		9.0	9.5		-	
Madison Main Fork											
1C03M	Hebgen Lake	7430	4B	14.6	5/31		12.6	10.0		-	
1J03M	Sawtooth Ridge	6240	4A	5.9	5/31		5.6	5.2		5.5	
Yellowstone											
1C01M	Beartie Ridge	8030	4A	17.6	5/31		17.2	15.8		16.4	
1J01M	Northeast Entrance	7230	4B	9.4				9.7		9.1	

*Average soil moisture of months

RESERVOIR STORAGE DATA

AS OF MAY 31, 1966

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE THIS YEAR	USEABLE STORAGE LAST YEAR	USEABLE STORAGE AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,428.0	3,046.0	2,245.0	2,793.6**
	Flathead Lake	1,791.0	1,509.0	1,457.0	1,559.2
	Camas (Sum or 4)	45.2	34.3	35.0	41.7
	Mission Valley (Sum of 8)	100.3	61.4	58.3	68.8
Clark Fork	Georgetown Lake	31.0	21.7	25.3	24.0
	Noxon Rapids	334.6		192.2	-
Bitterroot	Como	34.9	27.8	28.7	29.0
	Painted Rocks	31.7	32.4	33.2	32.4
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	328.9	134.7	147.3	-
	Lima	84.0	70.1	77.9	58.1
Ruby	Ruby	38.8		-	35.4**
	Hebgen Lake	377.5	354.6	262.3	270.5
	Ennis Lake	41.0	39.4	24.5	35.6
Gallatin	Middle Creek	8.0	8.2	5.1	6.4**
Missouri	Canyon Ferry	2,043.0	1,528.0	1,603.0	1,756.8**
	Hauser & Helena	61.9	59.0	46.5	53.2
	Lake Helena	10.4	9.4	5.3	7.6
	Holter Lake	81.9	77.4	70.8	72.8
	Smith River	10.7		11.6	8.7
	Ackley Lake	5.8		-	4.2
	Durand	7.0		7.0	6.4
	Martinsdale	23.1		20.5	15.0
	Deadman's Basin	72.2		70.2	46.8**
	Fort Peck	19,410.0	16,560.0	16,880.0	11,651.7
Sun	Gibson	105.0	95.0	94.4	94.4
	Willow Creek	32.3	27.0	25.2	27.0
	Pishkun	32.0	27.0	30.9	28.4
Marias	Lower Two Medicine		-	-	9.0
	Four Horns	19.2	15.0	-	11.6
	Swift		-	-	29.6
	Lake Frances	112.0	100.9	97.5	104.4
	Tiber	1,347.0	752.9	988.2	729.5**
Milk	Fresno	127.2	105.1	119.9	107.1
	Nelson	66.8	54.7	55.5	40.7
	Lake Sherburne	66.1	31.8	35.6	35.2
Yellowstone	Mystic Lake	20.8	6.0	1.9	6.3
	Tongue River	68.0		26.9	28.7
	Cooney	27.5	23.4	15.2	17.9**
Big Horn	Boysen	700.3	346.8	241.9	228.5
	Buffalo Bill	373.1	284.3	184.7	205.4
	Bull Lake	151.7	96.8	44.4	72.4
	Yellowtail	1,409.0	490.9	-	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

RESERVOIR STORAGE DATA

As of May 31, 1966

(1000 acre feet)

Basin	Reservoir	Usable Capacity	Storage This Year	Storage Last Year	Average
SACRAMENTO RIVER BASIN					
Pitcher	Shasta Dam	3,428.0	3,446.0	2,816.0	2,751.6**
	Pitcher Lake	1,312.0	1,[illegible]	1,277.0	1,559.6
	Clear (Sac or 4)	44.2	34.3	35.0	21.7
	Bidwell Valley(Sac or5)	120.3	21.4	59.3	60.8
Clear Fork	Westgate Lake	31.0	21.7	25.3	23.0
	Black Butte	234.6		192.2	-
Stillwater	Clear	34.9	27.8	24.7	29.0
	Bridge Lake	30.7	24.4	23.2	32.4
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	329.9	124.7	147.3	-
	Lima	84.0	74.1	77.8	58.1
Ruby	Ruby	34.8		-	35.4**
	Hyrum Dam	127.5	75.6	62.3	77.3
	Tenmile Lake	43.0	7.4	24.5	29.9
Gallatin	Middle Creek	8.3	8.2	8.1	6.4**
Missouri	Canyon Ferry	2,051.0	1,[illegible]	1,[illegible]	1,[illegible]**
	Gates & Malone	61.6	27.0	44.8	53.2
	Lake Helena	10.4	5.4	3.3	7.4
	Holter Lake	81.9	77.4	70.8	72.8
	Smith River	10.7		11.6	8.7
	Ackley Lake	5.8		-	4.2
	Tiber	7.0		7.0	6.4
	Martinsdale	23.1		20.5	15.6
	Deadman's Basin	32.2		20.2	16.8**
	Fort Peck	19,020.0	14,560.0	16,220.0	11,[illegible]
Sun	Gibson	105.0	95.8	94.4	94.4
	Willow Creek	32.3	27.0	25.2	27.0
	Pishkun	20.0	27.0	30.5	20.4
Marias	Lower Two Medicine	-	-	-	5.0
	Four Horns	19.2	15.0	-	11.6
	Nilt		-	-	29.6
	Lake Frances	122.0	140.9	97.5	104.4
	Tiber	1,347.0	732.9	448.2	720.5**
MILK	Fresno	127.2	105.1	110.9	107.1
	Nelson	66.8	51.7	55.5	40.7
	Lake Sherburne	64.1	31.8	35.6	35.2
Yellowstone	Nyasia Lake	20.8	6.0	1.9	6.3
	Tongue River	84.0		26.9	28.7
	Cooney	27.5	23.4	15.2	17.9**
Big Horn	Boysen	700.1	316.8	241.9	228.5
	Buffalo Bill	372.1	284.3	184.7	205.4
	Bull Lake	121.7	76.8	44.1	72.4
	Yellowtail	1,020.0	490.9	-	-

Agencies Cooperating in Collecting Data Contained in this Bulletin

U. S. Forest Service
Region 1, Missoula, Montana

U. S. Geological Survey
Helena, Montana

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Omaha, Nebraska

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana

U. S. Bureau of Sports Fisheries and Wildlife
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

U. S. Soil Conservation Service
Montana, Wyoming, Idaho

Soil and Water Conservation Districts
Montana Counties

U. S. Bonneville Power Administration
Portland, Oregon

U. S. National Park Service
Yellowstone National Park
Glacier National Park

Montana Power Company
Butte, Montana

State Water Conservation Board
Helena, Montana

North Montana Branch Station
Agricultural Experiment Station
Havre, Montana

Montana State University
Agricultural Experiment Station
Bozeman, Montana

University of Montana
School of Forestry
Missoula, Montana

Johnson Flying Service, Inc.
Missoula, Montana

Water Rights Branch, Dept. of Lands and Forests
Victoria, British Columbia

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